

This document describes system integration procedures of Atheros Fusion driver on Ubuntu 8.10. Some details might be different from your system.

Please make adjustments to fit your system configuration if necessary.

A. Preparation:

1. Running environment

- i. Remove existing Madwifi modules (if any).

```
rm -rf /lib/modules/$(uname -r)/madwifi
```

- ii. Remove ath*.ko and wlan*.ko from directory “/lib/modules/\$(uname -r)/volatile/”

```
rm -f /lib/modules/$(uname -r)/volatile/ath*.ko
rm -f /lib/modules/$(uname -r)/volatile/wlan*.ko
```

- iii. Modify /etc/default/linux-restricted-modules-common

Make sure the file contains this line:

```
DISABLED_MODULES="madwifi ath_hal"
```

Otherwise ath_hal.ko would appear after every boot.

- iv. **Reboot the system.**

Reboot is required here otherwise Ubuntu could be confused by its built-in Madwifi modules.

This clears the possibly loaded Madwifi modules in memory and avoids potential driver collision problems.

B. System integration:

1. Edit /etc/pm/sleep.d/01-fusion

This script handles ACPI S3 / S4 (suspend/hibernate).

```
# It's called when suspending / resuming

driver_name() { basename $(readlink "$1/device/driver"); }

listifs() {
    for f in "/sys/class/net/$1*"; do
        [ "$(driver_name $f)" = "$2" ] && basename "$f"
    done
}

# Driver name is "11n_ath_pci"
athifs="$(listifs ath 11n_ath_pci)" # VAPs have pattern "ath*"
phyifs="$(listifs wifi 11n_ath_pci)" # physical interfaces have pattern "wifi*"

case "$1" in
    "suspend" | "hibernate" )
        for i in $athifs; do
            /sbin/ifconfig $i down
            /sbin/iwpriv $i get_scanvalid | cut -d: -f2 > /tmp/scanvalid.$i
            /sbin/iwpriv $i scanvalid 1
        done
        ;;
    "resume" | "thaw" )
        for i in $phyifs; do /sbin/ifconfig $i up; done
        sleep 1
        for i in $athifs; do
            /sbin/ifconfig $i up
            /sbin/ifconfig $i down
            /sbin/ifconfig $i up
            /sbin/iwpriv $i scanvalid $(cat /tmp/scanvalid.$i)
        done
        rm -f /tmp/scanvalid.*
        ;;
esac
```

This shell script needs execution permission to work correctly.

2. Enabling power saving mode

By default power-saving mode is not enabled. If you want to maximize battery life of a laptop PC, please enable it by running this command:

```
$ iwpriv ath0 powersave 1
```

Make sure it's executed during system initialization.